Amendment to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in the application:

Claims 1-3 have been canceled.

4. (New) A method for controlling polarization of light with a polarization controller which comprises a plurality of adjustable polarization elements, comprising:

directing an input beam of light through the adjustable polarization elements of the polarization controller;

measuring at least a portion of light transmitted through the polarization controller to produce a feedback signal;

in response to the feedback signal, controlling the adjustable polarization elements of the polarization controller, one element at a time, to maximize or minimize the feedback signal, in order to control the polarization of the light transmitted through the polarization controller; and

when an adjustable polarization element that is being adjusted operates near a limit of an operating range, adjusting the control of the adjustable polarization element to be away from the limit while adjusting other adjustable polarization elements, one at a time, to maximize or minimize the feedback signal until the adjustable polarization element is operated within a range that is away from an upper limit and an lower limit of the operating range without resetting any of the adjustable polarization elements in the polarization controller.

5. (New) The method as in claim 4, wherein the controlling of the adjustable polarization elements comprises:

dithering a control over each adjustable polarization element to determine a direction of an adjustment of the control which further maximizes or minimizes the feedback signal; and

making an incremental adjustment in the control along the determined direction for each adjustable polarization element to further maximize or minimize the feedback signal.

6. (New) The method as in claim 5, wherein the controlling of the adjustable polarization elements comprises:

when the incremental adjustment in the control along the determined direction stops maximizing or minimizing the feedback signal, applying a different adjustment in the control along a direction opposite to the determined direction.

7. (New) The method as in claim 4, further comprising:

when each of the adjustable polarization elements is operated within a range that is away from the upper limit and the lower limit of the operating range, determining a difference between a current operating point of each of the adjustable polarization elements and a middle range operating point between the upper and lower limits;

selecting an adjustable polarization element which has a largest difference between the current operating point and the middle range operating point between the upper and lower limits; and

adjusting the control of the selected adjustable polarization element to operate closer to the middle range operating point while adjusting other adjustable polarization elements, one at a time, to maximize or minimize the feedback signal without resetting any of the adjustable polarization elements in the polarization controller.

8. (New) The method as in claim 4, further comprising using a polarization controller which comprises six adjustable polarization elements as the polarization controller to control polarization of light.

9. (New) The method as in claim 4, further comprising controlling the polarization of the light transmitted through the polarization controller to be stabilized in a selected polarization.

10. (New) The method as in claim 4, further comprising controlling the polarization of the light transmitted through the polarization controller to compensate for an effect of a polarization mode dispersion in the light.

11. (New) The method as in claim 4, further comprising controlling the polarization of the light transmitted through the polarization controller to reduce a polarization dependent loss.

12. (New) The method as in claim 4, wherein the measuring of at least a portion of light transmitted through the polarization controller to produce a feedback signal comprises:

detecting a portion of the light in a selected polarization to produce the feedback signal.

13. (New) The method as in claim 12, further comprising using a partial polarization state generator to split the portion of the light in the selected polarization.

14. (New) The method as in claim 4, further comprising:

inserting an optical element in the optical path of the light transmitted through polarization controller to modify a property of the light prior to measurement of the portion of the light.

15. (New) The method as in claim 14, wherein the inserted optical element causes at least a rotation of polarization of the light.

16. (New) The method as in claim 14, wherein the inserted optical element causes at least a differential group delay in the light.

17. (New) The method as in claim 14, wherein the inserted optical element an electro-optic modulator.

18. The method as in claim 14, wherein the inserted optical element causes at least a change in a polarization dependent loss in the light.

19. (New) A device, comprising:

a polarization controller which comprises a plurality of adjustable polarization elements along an optical path in series and operates to control polarization of light that transmits through the optical path, wherein each adjustable polarization element is adjustable in response to a control voltage to change the polarization of the light;

a sensing unit to measure at least a portion of the light transmitted through the polarization controller and to produce a feedback signal from the measurement; and

a feedback control which processes the feedback signal and responds to the feedback signal to control the adjustable polarization elements, one element at a time, to maximize or minimize the feedback signal without resetting any of the adjustable polarization elements in the polarization controller,

wherein the feedback control is adapted to determine whether an adjustable polarization element that is being adjusted operates near a limit of an operating voltage range, and to adjust the control voltage of the adjustable polarization element to be away from the limit while adjusting other adjustable polarization elements, one at a time, to maximize or minimize the feedback signal until the adjustable polarization element is operated within a range that is away from an upper limit and an lower limit of the operating voltage range without resetting any of the adjustable polarization elements in the polarization controller.

20. (New) The device as in claim 19, wherein the feedback control is further adapted to:

dither a control voltage over each adjustable polarization element to determine a direction of an adjustment of the control voltage which further maximizes or minimizes the feedback signal; and

make an incremental adjustment in the control voltage along the determined direction for each adjustable polarization element to further maximize or minimize the feedback signal.

21. (New) The device as in claim 20, wherein the feedback control is further adapted to:

when the incremental adjustment in the control voltage along the determined direction stops maximizing or minimizing the feedback signal, apply a different adjustment in the control voltage along a direction opposite to the determined direction.

22. (New) The device as in claim 19, wherein the feedback control is further adapted to:

when each of the adjustable polarization elements is operated within a range that is away from the upper limit and the lower limit of the operating range, determine a difference between a current operating point of each of the adjustable polarization elements and a middle range operating point between the upper and lower limits;

select an adjustable polarization element which has a largest difference between the current operating point and the middle range operating point between the upper and lower limits; and

adjust the control voltage of the selected adjustable polarization element to operate closer to the middle range operating point while adjusting other adjustable polarization elements, one at a time, to maximize or minimize the feedback signal without resetting any of the adjustable polarization elements in the polarization controller.

23. (New) The device as in claim 19, wherein the polarization controller comprises six adjustable polarization elements.